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APPLICATION NO ATTY. DOCKET NO. OTPE 1744.1200001 09/987,193 FORM PTO-1449 APPLICANT Rawlins et al. SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT JUL 0 1 2003 FILING DATE GROUP November 13, 2001 2124 **U.S. PATENT DOCUMENTS** MADEMARY **EXAMINER** INITIAL **DOCUMENT** DATE NAME **CLASS FILING DATE** SUB-NUMBER CLASS AB50 3,246,084 04/1966 Kryter AC50 3,702,440 11/1972 Moore AD50 3,767,984 10/1973 Shinoda et al. AE50 3,852,530 12/1974 Shen AF50 4,220,977 09/1980 Yamanaka ₹₹ AG50 5,016,242 05/1991 Tang AH50 5,937,013 08/1999 Lam et al. A150 01/2000 6,014,551 Pesola et al. **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-TRANSLATION **CLASS** AK20 DE 196 27 640 A1 01/1997 DE H<sub>0</sub>3D 7/12 No AL20 EP 0 087 336 A1 08/1983 EP H<sub>0</sub>3D 7/12 No AM20 EP 0 087 336 B1 07/1986 FP H<sub>0</sub>3D 7/12 No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) RECEIVED .1(11 0 2 2003 **Technology Center 2100** Razavi, B., "A 900-MHz/1.8-Ghz CMOS Transmitter for Dual-Band Applications," Symposium on VLSI Circuits ΑP <u>56</u> Digest of Technical Papers, IEEE, pp. 128-131 (1998). Ritter, G.M., "SDA, A New Solution for Transceivers," 16th European Microwave Conference, Microwave ΑQ <u>56</u> Exhibitions and Publishers, pp. 729-733 (September 8, 1986). DIALOG File 351 (Derwent WPI) English Language Patent Abstract for FR 2 669 787, 1 page (May 29, 1992-AR <u>56</u> Date of publication of application). **EXAMINER** DATE CONSIDERED 27 04

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APPLICATION NO ATTY. DOCKET NO. 09/987,193 1744.1200001 FORM PTO-1449 APPLICANT JUL 0 1 2003 Rawlins et al. SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE 2124 November 13, 2001 PADEMAR **U.S. PATENT DOCUMENTS EXAMINER** FILING DATE SUB-CLASS DATE NAME INITIAL **DOCUMENT CLASS** NUMBER 06/2000 Sokoler **AA51** 6,073,001 07/2000 Palermo et al. AB51 6,085,073 05/21/1999 Glöckler et al. AC51 06/2002 6,400,963 B1 RECEIVED 05/2001 Tayloe AD51 6.230,000 B1 Pardoen 5,483,695 01/1996 AE51 JIII\_ 0 2 2003 04/16/1999 Sorrells et al. 04/2003 5 AF51 6,542,722 B1 04/16/1999 6,560,301 B1 05/2003 Cook et al. AG51 Technology Center 2100 08/2000 Cooper et al. **AH51** 6,098,046 04/1995 Goldstein AI51 5,410,326 FOREIGN PATENT DOCUMENTS **EXAMINER** TRANSLATION SUB-COUNTRY CLASS DATE INITIAL DOCUMENT NUMBER **CLASS** N/A 7/12 H<sub>0</sub>3D 08/1997 EP AJ21 EP 0 789 449 A2 No 7/14 H03D 05/1992 FR AK21 FR 2 669 787 A1 7/18 N/A H03D 11/1998 GB AL21 GB 2 324 919 A No 1/10 JΡ H04B 02/1986 **AM21** JP 61-30821 OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Akos, D.M. et al., "Direct Bandpass Sampling of Multiple Distinct RF Signals," IEEE Transactions on <u>57</u> ΑN Communications, IEEE, Vol. 47, No. 7, pp. 983-988 (July 1999). Patel, M. et al., "Bandpass Sampling for Software Radio Receivers, and the Effect of Oversampling on Aperture ΑO <u>57</u> Jitter," VTC 2002, IEEE, pp. 1901-1905 (2002). English-language Abstract of Japanese Patent Publication No. 61-030821, from http://www1.ipdl.jpo.go.jp, 1 AP <u>57</u> Page (February 13, 1986- Date of publication of application). English-language Abstract of Japanese Patent Publication No. 05-327356, from http://www1.ipdl.jpo.go.jp, 1 AQ <u>57</u> Page (December 10, 1993 - Date of publication of application). Tayloe, D., "A Low-noise, High-performance Zero IF Quadrature Detector/Preamplifier," RF Design, Primedia AR <u>57</u> Business Magazines & Media, Inc., pp. 58, 60, 62 and 69 (March 2003).

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APPLICATION NO. ATTY. DOCKET NO. 09/987,193 1744.1200001 FORM PTO-1449 APPLICANT Rawlins et al. SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE JUL 0 1 2000 2124 November 13, 2001 **U.S. PATENT DOCUMENTS EXAMINER** ARADE DE ATE INITIAL **DOCUMENT** DATE NAME CLASS SUB-NUMBER CLASS AA52 5,956,025 09/1999 Goulden et al. H **AB52** 6,127,941 10/2000 Van Ryzin <del>ABD</del> AC52 10/1996 5,564,097 Swanke AD52 5,898,912 04/1999 Heck et al. RECEIVED AE52 4,660,164 04/1987 Leibowitz AF52 6,580,902 B1 06/2003 Sorrells et al. 04/16/1999 JUL 012 2003 AG52 4,857,928 08/1989 Gailus et al. 5,389,839 AH52 02/1995 Heck Technology|Center 2100 AI52 Pace et al. 5,471,665 11/1995 **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-TRANSLATION **CLASS** AJ22 JP 5-327356 12/1993 JP H<sub>0</sub>3D 7/00 No 7/16 AK22 EP 0 643 477 A2 & A3 03/1995 EP H03D N/A 7/16 AL22 EP 0 877 476 A1 11/1998 EP H03D N/A AM22 EP 0 977 351 A1 -02/2000 EP H03D 7/16 N/A OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Dines, J.A.B., "Smart Pixel Optoelectronic Receiver Based on a Charge Sensitive Amplifier Design," IEEE AN <u>58</u> Journal of Selected Topics in Quantum Electronics, IEEE, Vol. 2, No. 1, pp. 117-120 (April 1996). Simoni, A. et al., "A Digital Camera for Machine Vision," 20th International Conference on Industrial Electronics, AO <u>58</u> Control and Instrumentation, IEEE, pp. 879-883 (September 1994). Stewart, R.W. and Pfann, E., "Oversampling and sigma-delta strategies for data conversion," Electronics & AP <u>58</u> Communication Engineering Journal, IEEE, pp. 37-47 (February 1998). Rudell, J.C. et al., "A 1.9-Ghz Wide-Band IF Double Conversion CMOS Receiver for Cordless Telephone AQ <u>58</u> Applications," IEEE Journal of Solid-State Circuits, IEEE, Vol. 32, No. 12, pp. 2071-2088 (December 1997). **EXAMINER** DATE CONSIDERED 04 22 EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

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Page 3 of 56 ATTY. DOCKET NO. APPLICATION NO. 1744.1200001 09/987,193 FORM PTO-1449 APPLICANT Rawlins et al. INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP November 13, 2124 **U.S. PATENT DOCUMENTS** EXAMINER INITIAL DOCUMENT DATE NAME CLASS SUB-FILING DATE NUMBER CLASS AA3 3,118,117 01/1964 King et al. AB3 3,226,643 12/1965 McNair AC3 3,258,694 06/1966 Shepherd AD3 3,383,598 05/1968 Sanders AE3 3,384,822 05/1968 Miyagi AF3 3,454,718 07/1969 Perreault AG3 3,523,291 08/1970 Pierret **АНЗ** 3,548,342 12/1970 Maxey AI3 3,555,428 01/1971 Perreault **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-TRANSLATION CLASS AJ3 EP 0 423 718 A2 🗸 04/1991 EP H04N 7/01 N/A АКЗ EP 0 423 718 A3 \ 08/1992 ΕP H04N 7/01 N/A AL3 EP 0 486 095 A1 05/1992 ΕP H<sub>0</sub>3D 3/00 N/A АМ3 EP 0 486 095 B1 02/1997 H<sub>0</sub>3D 3/00 N/A OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Austin, J. et al., "Doppler Correction of the Telecommunication Payload Oscillators in the UK T-SAT," 18th ΑN European Microwave Conference, Microwave Exhibitions and Publishers Ltd., pp. 851-857 (September 12 - 15, 3 Auston, D.H., "Picosecond optoelectronic switching and gating in silicon," Applied Physics Letters, American AO 3 Institute of Physics, Vol. 26, No. 3, pp. 101-103 (February 1, 1975). Baher, H., "Transfer Functions for Switched-Capacitor and Wave Digital Filters," *IEEE Transactions on Circuits and Systems*, IEEE Circuits and Systems Society, Vol. CAS-33, No. 11, pp. 1138-1142 (November 1986). AP 3 Baines, R., "The DSP Bottleneck," IEEE Communications Magazine, IEEE Communications Society, pp. 46-54 AQ 3 Banjo, O.P. and Vilar, E., "Binary Error Probabilities on Earth-Space Links Subject to Scintillation Fading," AR 3 Electronics Letters, IEE, Vol. 21, No. 7, pp. 296-297 (March 28, 1985).

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	AE4	3,6	29,696	12/1	971	Bartelink						
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124	AG4	3,68	39,841	09/1	972	Bel	lo et al.					
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A	AR	Burgueño, A. et al., "Spectral Analysis of 49 Years of Rainfall Rate and Relation to Fade Dynamics," <i>IEEE Transactions on Communications</i> , IEEE Communications Society, Vol. 38, No. 9, pp. 1359-1366 (September 1990).										
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	AF6	4,06	6,919	01/19	78	Hunt	ington			<b>ļ</b>	
	AG6	4,08	1,748	03/19	78	Batz				ļ	
- d2)	AH6	4,13	0,765	12/19	78	Arak	elian <i>et al</i> .			ļ	<del></del>
<u> </u>	AI6	4,13	0,806	12/19	78	Van	Gerwen et al.				<u> </u>
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A.	AL6	EP 0	837 565 A1	/	04/1998		EP	HO	4B	1/69	N/A
Jet .	AM6	EP 0	) 862 274 A1	√ 	09/1998		EP	H0	3M	1/06	N/A
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A	AN	<u>6</u>	Catalan, C. a. No. 12, pp. 12	nd Vila 238-12	ir, E., "Appro 40 (June 11	oach fo , 1998	or satellite slant path remo ).	te sensino	g," <i>Electi</i>	ronics Letter	s, IEE, Vol. 34,
A	AO	<u>6</u>	Chan, P. et al Conference, I	., "A H EEE C	lighly Linear Communicati	1-GH: on So	z CMOS Downconversion ciety, pp. 210-213 (Septer	Mixer," <i>E</i> nber 22-2	uropean 4, 1993).	Solid Stale	Circuits
Æ	АР	<u>6</u>	Copy of Deck related subjec	ıration et matt	of Michael . er, 2 pages.	J. Bulti	man filed in patent applica	ition Ser. I	No. 09/1	76,022, Whic	ch is directed to
R	AQ	<u>6</u>	Copy of Deck related subject	ration t matt	of Robert W er, 2 pages.	V. Coo	k filed in patent application	n Ser, No.	09/176,	022, which i	s directed to
PA	AR 6 Copy of Declaration of Alex Holtz filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 3 pages.										
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Tal.	AB8	4,346	6,477	08/19	82	Gord	у					
	AC8	4,355	5,401	10/19	82	lkom	a et al.			<u> </u>		
PN	AD8	4,356	6,558	10/19	82	Owe	n et al					
12kg	AE8	4,360	0,867	11/19	982	Gond	la				<u></u>	
- M	AF8	4,363	3,132	12/19	82	Collin	1					
137	AG8	4,365	5,217	12/19	82	Berg	er et al.					
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M.	AJ8	JP 2	-39632		02/1990		JP	Н0	4B	7/12	No	
PA	AK8	JP 2	-131629		05/1990		JP	НО	4B	7/12	No	
M	AL8	JP 2	-276351 🗸		11/1990		JP	НО	4L	27/22	No	
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PA	AO	8	DIALOG File publication of	347 (J applio	APIO) Engliseation).	sh Lar	guage Patent Abstract	for JP 2-396	32, 1 pa	age (Februar	y 8, 1990 - Date of	
K	АР	<u>8</u> ✓	DIALOG File (December 2	348 (E 6, 199	European Pa 6 - Date of p	tents) ublica	English Language Pate ion of application),	nt Abstract f	or EP 0	785 635 A1,	3 pages	
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	AB9	4,430		02/19		Betzl	et al.						
AN	AC9	4,446		05/19	84	Chan	g et al.						
AN .	AD9	4,456	5,990	06/19	84	Fishe	er et al.						
131	AE9	4,472	2,785	09/19	84	Kasu	ga						
NA.	AF9	4,479	,226	10/19	84	Prab	hu et al.						
A	AG9	4,481	,490	11/19	84	Hunt	ey						
	AH9	4,481	,642	11/19	84	Hans	on			<u></u>			
74	AI9	4,485	,488	11/19	84	Houd	lart						
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A	AQ	9	Faulkner, N.I Techniques," (1984).	D. and ' <i>CPEN</i>	Vilar, E., "Ti 1 84 Digest (	me Do Confer	omain Analysis of Frequency sence on Precision Electroma	Stability gnetic N	Using l	Non-Zero De ments, IEEE	ad-Time Counter , pp. 81-82		
A	AR	9	Filip, M. and Vilar, E., "Optimum Utilization of the Channel Capacity of a Satellite Link in the Presence of Amplitude Scintillations and Rain Attenuation," <i>IEEE Transactions on Communications</i> , IEEE Communications Society, Vol. 38, No. 11, pp. 1958-1965 (November 1990).										
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D	AB11		3,300	07/19		<u> </u>	les, II et al.						
191	AC11	_	2,464	09/19			kawa et al.						
	AD11		2,518	09/19		Gan	s et al.						
7.1	AE11	<del></del>	6,191	10/19		Gala	ani <i>et al</i> .						
137	AF11	+	1,217	11/19		Sax	e et al.						
	AG11	+	8,517	12/19		_	warz et al.						
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K	AL11	DE :	35 41 031 A1 ×	,	05/1986		DE	H03D	3/00	Yes (See AR50)			
B	AM11	EP (	732 803 A1 `	<u> </u>	09/1996		EP	H03D	3/00	Yes (See AN51)			
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8	AA24		5,114	10/19	94	Sutt	erlin et al.					
<b>1</b>	AB24	h	1,408	11/19		Wat	anabe et al.					
134	AC24	<b></b>	9,800	11/19	94	Taka	agi <i>et al</i> .					
184	AD24		5,146	12/19	94	Cha	lmers					
AN .	AE24	5,379	9,040	01/19	95	Mizo	omoto <i>et al.</i>	$\_I$				
M	AF24	5,37	9,141	01/19	95	Thor	mpson <i>et al.</i>					
FOI	AG24	5,38	8,063	02/19	95	Taka	atori et al.					
124	AH24	5,39	0,364	02/19	95	Web	oster et al.					
Tr.	A124	5,40	0,084	03/19	95	Sca	гра			<u> </u>		
FOREIGN PATENT DOCUMENTS												
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	AJ24					_					Yes No	
	AK24 Yes No											
	AL24										Yes No	
	AM24										Yes No	
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A S	AN	\ 24 J	Press Releas Associates, 2				inounces Joint Product Deve i).	opmen	ts With \	∕TEL," Lippe	rt/Heilshom and	
M	AO	<u>24</u> ./	Press Releas Associates, 3				nounces First Quarter Finan	cial Res	suits," Lij	ppert/Heilsho	rn and	
A	ΑP	<u>24</u>					op 100 Product Districts' Cho (June 29, 1995).	ice Aw	ard," Par	kervision Ma	rketing and	
H	Press Release, "Parkervision National Sales Manager Next President of USDLA," Parkervision Marketing and Manufacturing Headquarters, 1 Page (July 6, 1995).											
A	AR	24	Press Release, "Parkervision Granted New Patent," Parkervision Marketing and Manufacturing Headquarters, 1 Page (July 21, 1995).									
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THE STATE OF THE S	AA25	5,404		04/1995		Lee et al.								
E	AB25	5,410,541		04/19	95	Hotto								
72	AC25	5,410	0,743	04/1995		Seely et al.								
The Land	AD25	5,412	2,352	05/19	95	Grai	nam							
426	AE25	5,416	5,803	05/19	95	Jane	er							
10	AF25	5,422	2,913	06/19	95	Wilk	inson							
A	AG25	5,423	3,082	06/19	95	Cyg	an <i>et al.</i>	_						
<del></del>	AH25	5,42	3,638	06/19		-	fi et al.							
1994	Al25	5,42	3,640	06/19		Tow				<u> </u>	<u>.L.,</u>			
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	AM25										Yes No			
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A	AN	Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (July 31, 1995).												
A	AO	<u>25</u> +	Press Release, "Parkervision, Inc. Expands Its Cameraman System II Product Line," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (September 22, 1995).											
JT.	AP.	<u>25</u> ~	25 - Press Release, "Parkervision Announces New Camera Control Technology," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 25, 1995).											
M	ΑQ	25 Press Release, "Parkervision, Inc. Announces Completion of VTEL/Parkervision Joint Product Line," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1995).												
A	AR 25 Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1995).													
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ASS.	AA26	+	4,546	07/19	95	Palmer							
187	AB26	5,43	8,692	08/19	995	Mohi	ndra						
	AC26	5,44	4,415	08/19	95	Dent	Dent et al.						
	AD26	5,44	4,416	08/19	995	Ishik	awa et al.				L		
434	AE26	5,44	4,865	08/19	995	Heck	et al.						
126	AF26	5,44	6,421	08/19	995	Kech	kaylo						
	AG26	5,44	6,422	08/19	95	Matti	la et al.						
191	AH26	5,44	8,602	09/19	95	Ohm	ori et al.						
924	Al26	5,45	1,899	09/1995		Lawt	Lawton			l			
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	AK26										Yes No		
	AL26										Yes No		
	AM26										Yes No		
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Æ	AN	<u>26</u>	Press Release, "Parkervision's Cameraman Personal Locator Camera System Wins Telecon XV Award," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (November 1, 1995).										
PC	АО	<u>26</u>	Press Releas Marketing and	Press Release, "Parkervision, Inc. Announces Purchase Commitment From VTEL Corporation," Parkervision Marketing and Manufacturing Headquarters, 1 Page (February 26, 1996).									
Pa	АР	<u>26</u>	Press Releas and Manufact	Press Release, "ParkerVision, Inc. Announces Fourth Quarter and Year End Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (February 27, 1996).									
<b>\$</b>	AQ	<u>26</u>		Press Release, "ParkerVision, Inc. Expands its Product Line," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (March 7, 1996).									
為	AR	<u>26</u>		Press Release, "ParkerVision Files Patents for its Research of Wireless Technology," Parkervision Marketing and Manufacturing Headquarters, 1 Page (March 28, 1996).									
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APPLICATION NO. ATTY. DOCKET NO. 09/987,193 1744.1200001 FORM PTO-1449 APPLICANT Rawlins et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE 2124 2001 November 13, U.S. PATENT DOCUMENTS **EXAMINER** FILING DATE **CLASS** SUB-NAME DATE **DOCUMENT** INITIAL CLASS NUMBER Dutta 09/1995 **AA27** 5,454,007 09/1995 Fruit et al. AB27 5,454,009 10/1995 Palmer AC27 5,463,356 Hobden 10/1995 AD27 5,463,357 Kobayashi et al. AE27 5,465,071 11/1995 Hiben et al. 11/1995 AF27 5,465,410 <u>5,</u>465,415 11/1995 Bien AG27 McEwan 11/1995 **AH27** 5,471,162 McEwan 12/1995 AI27 5,479,120 FOREIGN PATENT DOCUMENTS **EXAMINER** TRANSLATION CLASS SUB-DATE COUNTRY INITIAL DOCUMENT NUMBER **CLASS** Yes AJ27 Nο Yes **AK27** Nο Yes AL27 No Yes **AM27** N٥ OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces First Significant Sale of Its Cameraman® Three-Chip System," AN <u>27</u> Parkervision Marketing and Manufacturing Headquarters, 2 pages (April 12, 1996). Press Release, "Parkervision, Inc. Introduces New Product Line For Studio Production Market," Parkervision AO <u>27</u> Marketing and Manufacturing Headquarters, 2 Pages (April 15, 1996). Press Release, "Parkervision, Inc. Announces Private Placement of 800,000 Shares," Parkervision Marketing AΡ 27 and Manufacturing Headquarters, 1 Page (April 15, 1996). AQ Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Parkervision Marketing and 27 Manufacturing Headquarters, 3 Pages (April 30, 1996). J Press Release, "ParkerVision's New Studio Product Wins Award," Parkervision Marketing and Manufacturing AR <u>27</u> Headquarters, 2 Pages (June 5, 1996). DATE CONSIDERED **EXAMINER** P Zahn al **EXAMINER**: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

ATTY. DOCKET NO. APPLICATION NO. 09/987,193 1744.1200001 FORM PTO-1449 APPLICANT Rawlins et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE 2124 2001 November 13, U.S. PATENT DOCUMENTS **EXAMINER** CLASS SUB-FILING DATE NAME DOCUMENT DATE INITIAL **CLASS** NUMBER Chow et al. AA28 5,479,447 12/1995 Kennedy et al. 01/1996 AB28 5,483,193 Weinberg et al. 01/1996 AC28 5,483,549 AD28 Heck et al. 5,483,691 01/1996 AE28 5,490,173 02/1996 Whikehart et al. Young et al. 02/1996 AF28 5,493,581 02/1996 Reis AG28 5,493,721 02/1996 Kwan et al. **AH28** 5,495,200 Hsu A128 5,495,202 02/1996 FOREIGN PATENT DOCUMENTS **EXAMINER** CLASS SUB-**TRANSLATION** COUNTRY INITIAL DOCUMENT NUMBER DATE CLASS Yes AJ28 No Yes AK28 No Yes AL28 No Yes AM28 No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision ΑN 28 Marketing and Manufacturing Headquarters, 3 Pages (August 1, 1996). Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Parkervision <u>28</u> AO Marketing and Manufacturing Headquarters, 2 Pages (October 29, 1996). Press Release, "PictureTel and ParkerVision Sign Reseller Agreement," Parkervision Marketing and ΑP <u>28</u> Manufacturing Headquarters, 2 Pages (October 30, 1996). Press Release, "CLI and ParkerVision Bring Enhanced Ease-of-Use to Videoconferencing," CLI/Parkervision, 2 AQ <u> 28</u> Pages (January 20, 1997). Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Results," Parkervision Marketing AR <u>28</u> and Manufacturing Headquarters, 3 Pages (February 27, 1997). **EXAMINER** DATE CONSIDERED 64 てみんし EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

conformance and not considered. Include copy of this form with next communication to Applicant.

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9	AA29	5,49	5,500	02/19	96	Jova	novich <i>et al.</i>						
<b>F</b>	AB29	5,49	9,267 03/1996			Ohe	et al.						
(E)	AC29	5,50	0,758	03/19	996	Thon	npson et al.						
-482	AD29	5,51	7,688	05/19	96	Faje	n et al.						
121	AE29	5,51	9,890	05/19	96	Pincl	dey						
Pro-	AF29	5,52	3,719	06/19	996	Long	o et al.						
	AG29	5,52	3,726	06/19	996	Kroe	ger <i>et al</i> .		7				
	AH29	+	3,760	06/19	996	McE	wan		1				
	Al29	_	9,770	07/19	996	Ishig	aki						
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	AJ29								Yes				
<del></del>	AK29	}-								No Yes No			
	AL29	<del>                                     </del>							1	Yes No			
	AM29									Yes No			
		<del></del>	ОТН	R (Inc	luding Auti	nor, T	itle, Date, Pertinent Page	es, etc.)					
A	AN	<u>29</u>	Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (April 29, 1997).										
A	AO	<u>29</u>	Press Releas 1997).	Press Release, "NEC and Parkervision Make Distance Learning Closer," NEC America, 2 Pages (June 18, 1997).									
Ā	AP	<u>29</u>	Press Releas Parkervision	Press Release, "Parkervision Supplies JPŁ with Robotic Cameras, Cameraman Shot Director for Mars Mission," Parkervision Marketing and Manufacturing Headquarters, 2 pages (July 8, 1997).									
M	AQ	<u>29</u>	Press Releas Marketing an	Press Release, "ParkerVision and IBM Join Forces to Create Wireless Computer Peripherals," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (July 23, 1997).									
Pa	AR	AR 29 Press Release, "ParkerVision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (July 31, 1997).											
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APPLICATION NO. ATTY. DOCKET NO. 09/987,193 1744.1200001 FORM PTO-1449 APPLICANT Rawlins et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE 2124 November 13, **U.S. PATENT DOCUMENTS EXAMINER** FILING DATE **CLASS** SUB-NAME DOCUMENT DATE INITIAL CLASS NUMBER Kajimoto et al. 09/1996 **AA30** 5,555,453 Weinberg **AB30** 5,557,641 09/1996 5,557,642 09/1996 Williams AC30 Smith et al. AD30 11/1996 5,579,341 Lindquist et al. 11/1996 AE30 5,579,347 Mohindra 12/1996 AF30 5,584,068 01/1997 Labreche et al. AG30 5,592,131 02/1997 Pagano et al. **AH30** 5,602,847 Wilson AI30 5,602,868 02/1997 FOREIGN PATENT DOCUMENTS **EXAMINER** TRANSLATION CLASS SUB-COUNTRY DOCUMENT NUMBER DATE INITIAL CLASS Yes AJ30 No Yes AK30 No Yes AL30 No Yes **AM30** No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces Private Placement of 990,000 Shares," Parkervision Marketing AN <u>30</u> and Manufacturing Headquarters, 2 Pages (September 8, 1997). Press Release, "Wal-Mart Chooses Parkervision for Broadcast Production," Parkervision Marketing and AO <u>30</u> Manufacturing Headquarters, 2 Pages (October 24, 1997). Press Release, "Parkervision, Inc. Announces Third Quarter Financial Results," Parkervision Marketing and ΑP 30 Manufacturing Headquarters, 3 Pages (October 30, 1997). Press Release, "ParkerVision Announces Breakthrough in Wireless Radio Frequency Technology," Parkervision AQ <u>30</u> Marketing and Manufacturing Headquarters, 3 Pages (December 10, 1997). Press Release, "Parkervision, Inc. Announces the Appointment of Joseph F. Skovron to the Position of Vice President, Licensing - Wireless Technologies," Parkervision Marketing and Manufacturing Headquarters, 2 AR <u> 30</u> Pages (January 9, 1998). DATE CONSIDERED **EXAMINER** 60 EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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PE	AA31	5,60	4,732	02/19	997	Kim e	et al.						
M	AB31	5,60	8,531	03/19	997	Hono	la et al.	4-					
	AC31	5,61	0,946	03/19	997	Tana	ka et al.						
- Pik	AD31	RE 3	35,494	04/19		Nicol				<u> </u>			
- <del>1</del>	AE31	5,61	7,451	04/19			ura et al.			<u> </u>			
	AF31	<del></del>	9,538	04/19			pel et al.			<u> </u>			
	AG31	<del> </del>	1,455	04/19			ers et al.	+-		ļ	<del> </del>		
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	AM31							1			Yes No		
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A	AN	<u>31</u>	Press Release, "Parkervision Announces Existing Agreement with IBM Terminates Company Continues of Strategic Focus Announced in December," Parkervision Marketing and Martufacturing Headquarters, 2 Page (January 27, 1998).										
M	AO	<u>31</u>	Press Release, "Laboratory Tests Verify Parkervision Wireless Technology," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (March 3, 1998).										
'' '		·											
A	АР	<u>31</u>	Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (March 5, 1998).										
A	AQ	<u>31</u>	Press Release, "Parkervision Awarded Editors' Pick of Show for NAB 98," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (April 15, 1998).										
M	AR	<u>31</u>	Press Releas Manufacturing	e, "Pa 3 Head	rkervision Ar dquarters, 3	noun Pages	ces First Quarter Financial Ro i (May 4, 1998).	esults,"	Parken	vision Market	ing and		
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X1-	AA32	5,640,4	24	06/19	97	Bana	vong et al.						
<b>AR</b>	AB32	5,640,4	28	06/19	97	Abe	et al.						
ACC.	AC32	5,640,6	98	06/19	97	Shen	et al.						
ARS.	AD32	5,648,9	85	07/19	997	Bjere	de et al.						
3.7A	AE32	5,650,7	85	07/19	97	Roda	<u> </u>						
78	AF32	5,661,4	24	08/19	997	Tang							
ARK	AG32	5,663,8	78	09/19	997	Walk	er						
- FEE	AH32	5,663,9	86	09/19	997	Striff	er						
721	Al32	5,668,8	36	09/19	97	Smit	n et al.						
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#	AO	32 P	ress Releas eadquarters	e, "Pa i, 2 Pa	rkervision E ges (July 29	xpands 9, 1998	s Senior Management Te ).	eam," Parkerv	ision Ma	rketing ar	nd Manufacturing		
A	AP  Press Release, "Parkervision Announces Second Quarter and Six Month Financial Results," Parkervision Marketing and Manufacturing Headquarters, 4 Pages (July 30, 1998).												
A	AQ	Press Release, "Parkervision Announces Third Quarter and Nine Month Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (October 30, 1998).											
A	AR	Press Release, "Questar Infocomm, Inc. Invests \$5 Million in Parkervision Common Stock," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (December 2, 1998).											
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24	AA33	5,68	0,078	10/19	97	Ariie								
RV	AB33	5,68	0,418	10/19	97	Croft	et al.							
	AC33	5,68	9,413	11/19	97	Jarar	nillo et al.							
	AD33	5,69	9,006	12/19	97	Zele	et al.							
<b>3</b>	AE33	5,70	5,955	01/19	98	Freel	ourg et al.							
	AF33	5,71	0,998	01/19	998	Opas					<u> </u>			
	AG33	5,71	4,910	02/19	98	Skoc	zen <i>et al.</i>				<u> </u>			
	AH33	5,71	5,281	02/19	98	Bly e	t al.	···						
LA .	AI33	5,72	1,514	02/19	98	Croc	cett et al.				<u> </u>			
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R	AN	<u>33</u>	Press Releas Headquarters				vo New Directors," Parken 9).	vision Marke	eting ar	nd Manufac	turing			
A	AO	<u>33</u>					ces Fourth Quarter and Yearters, 3 Pages (March 5,		ancial F	Results," Pa	rkervision			
R	АР	33					ement Offers New Automa arters, 2 Pages (April 13,		tion Sol	lution," Parl	ervision			
A	AQ 33 "Project COST 205: Scintillations in Earth-satellite links," Alta Frequenza: Scientific Review in Electronics, AEI, Vol. LIV. No. 3, pp. 209-211 (May-June, 1985).													
Ħ	AR	33 Razavi, B., RF Microelectronics, Prentice-Hall, pp. 147-149 (1998).												
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725	AB34	5,724	,653	03/19	98	Bake	r et al.			<b></b> _				
777	AC34	5,729	,577	03/19	98	Chen								
20	AD34	5,729	,829	03/19	98	Talwa	ar et al.			<del> </del>				
12	AE34	5,732	2,333	03/19	98	Cox e	et al			<u> </u>				
	AF34	5,736	6,895	04/19	98	Yu et	al.			<u> </u>	<del>                                       </del>			
100 m	AG34	5,737	,035	04/19	98	Rotze	oll			<u> </u>	<del>                                     </del>			
	AH34	5,742	2,189	04/19	98	Yosh	ida et al.			<del> </del>	<del> </del>			
180	AI34	5,748	3,683	05/19			n et al.			<u> </u>	<u>.l</u>			
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A	AP	<u>34</u>	Rein, H.M. a Transistors,"	nd Zah <i>Electn</i>	n, M., "Subr onics Letter	nanose s, IEE,	cond-Pulse Generator with Vol. 11, No. 1, pp. 21-23 (	h Variable January 9	Pulsev 9, 1975	width Using <i>A</i> ).	Avalanche			
A	AQ	Riad, S.M. and Nahman, N.S., "Modeling of the Feed-through Wideband (DC to 12.4 Ghz) Sampling-Head," <i>IEEE MTT-S International Microwave Symposium Digest</i> , IEEE, pp. 267-269 (June 27-29, 1978).												
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	AE36	5,818	,582	10/19	98	Ferna	ndez <i>et al.</i>			_			
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The same	AH36	5,864	,754	01/19	99	Hotto					<b>_</b>		
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A	AN	<u>36</u>			7		Ghz," <i>Microwaves &amp; RF</i> , Pe		ublishing.	, p. 212 (Sep	otember 1990	).	
A	AO	<u>36</u>	Sasikumar, N Vol. 71, No. (	Л. et al В, pp. 1	., "Active Co 1008-1009 (A	ompens August	sation in the Switched-Capa 1983).	acitor Bi	iquad," <i>P</i>	roceedings o	of the IEEE, II	EEE,	
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A	AQ 36 Shen, D.H. et al., "A 900-MHZ RF Front-End with Integrated Discrete-Time Filtering," <i>IEEE Journal of Solid-State Circuits</i> , IEEE Solid-State Circuits Council, Vol. 31, No. 12, pp. 1945-1954 (December 1996).												
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7	AC37	5,896	5,562	04/19	99	Heind	onen	-						
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	AE37	5,901	1,054	05/19		Leu e					ļ			
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A	AN	<u>37</u>	Shen, X. and Mechanisms,	Tawfil " <i>Elec</i> i	c, A.N., "Dyn tronics Lette	amic E rs, IEE	Behaviour of Radio Channels , Vol. 29, No. 17, pp. 1582-1	Due to 583 (A	Trans-lugust 19	Horizon Prop 9, 1993).	agation			
A.	AO	<u>37</u>	of the parabo	tic Ear	Jation and R	av Tra	pherical Diffraction and Trop cing Methods," <i>IEE Colloqui</i> ave propagation, IEE, pp. 4/1	ım on	Common	n modeling te	on Path with aid chniques for			
M	АР	<u>37</u>	Shen, X. and Electronics L	Vilar, etters,	E., "Path los IEE, Vol. 32	ss stati 2, No. 3	stics and mechanisms of tra 3, pp. 259-261 (February 1, 1	nshoriz 996).	on propa	agation over	a sea path,"			
AQ 37 Shen, D. et al., "A 900 MHZ Integrated Discrete-Time Filtering RF Front-End," IEEE International Solid State Circuits Conference, IEEE, Vol. 39, pp. 54-55 and 417 (February 1996).														
A	AR	<u>37</u>	Spillard, C. e Sixth Interna (April 4-7, 19	tional (	K-Band Trop Conference	osphe on Ant	ric Transhorizon Propagation ennas and Propagation (ICA)	i Unde P 89) /	r Differin Part 2: Po	g Meteorolog ropagation, Il	gical Conditions," EE, pp. 451-455			
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APPLICATION NO. ATTY. DOCKET NO. 09/987,193 1744.1200001 FORM PTO-1449 APPLICANT Rawlins et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE 2124 2001 November 13, U.S. PATENT DOCUMENTS **EXAMINER** CLASS **FILING DATE** SUB-DATE NAME INITIAL DOCUMENT CLASS NUMBER AA38 5,901,349 05/1999 Guegnaud et al. Miyatsuji et al. AB38 5,903,178 05/1999 Claverie et al. 05/1999 AC38 5,903,187 Salvi et al. 05/1999 AD38 5,903,196 Furutani et al. AE38 5,903,421 05/1999 05/1999 Sakamoto et al. AF38 5,903,553 Suzuki 05/1999 AG38 5,903,595 Kool et al. 05/1999 **AH38** 5,903,609 AI38 5,903,827 05/1999 Kennan et al. **FOREIGN PATENT DOCUMENTS EXAMINER** CLASS TRANSLATION DATE COUNTRY SUB-**DOCUMENT NUMBER** INITIAL CLASS Yes **AJ38** No Yes **AK38** Nο Yes AL38 No Yes **AM38** Nο OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Stafford, K.R. et al., "A Complete Monolithic Sample/Hold Amplifier," IEEE Journal of Solid-State Circuits, IEEE, ΑN <u>38</u> Vol. SC-9, No. 6, pp. 381-387 (December 1974). Staruk, W. Jr. et al., "Pushing HF Data Rates," Defense Electronics, EW Communications, Vol. 17, No. 5, pp. AO 38 211, 213, 215, 217, 220 and 222 (May 1985). Stephenson, A.G., "Digitizing multiple RF signals requires an optimum sampling rate," Electronics, McGraw-Hill, ΑP <u>38</u> pp. 106-110 (March 27, 1972). Sugarman, R., "Sampling Oscilloscope for Statistically Varying Pulses," The Review of Scientific Instruments, AQ <u> 38</u> American Institute of Physics, Vol. 28, No. 11, pp. 933-938 (November 1957). Sylvain, M., "Experimental probing of multipath microwave channels," Radio Science, American Geophysical AR <u>38</u> Union, Vol. 24, No. 2, pp. 160-178 (March-April 1989). **EXAMINER** DATE CONSIDERED 04 22 EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

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A	AO	41	Transactions	on Ull	rasonics. Fe	erroele	Signal Analysis Based o ctrics, and Frequency Co o. 1, pp. 1-3 (January 190	ntrol, IEEE	RF Sar Ultraso	npling Chanr onics, Ferroe	nel," <i>IEEE</i> lectrics, and	
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APPLICATION NO. ATTY. DOCKET NO. 09/987,193 1744.1200001 FORM PTO-1449 APPLICANT Rawlins et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE 2001 November 13, U.S. PATENT DOCUMENTS **EXAMINER** CLASS SUR-FILING DATE DATE NAME DOCUMENT INITIAL CLASS NUMBER 06/1998 Ushiroku et al. **AA42** 5,770,985 07/1998 Walley **AB42** 5,778,022 Zhou et al. 09/1998 AC42 5.812.546 Miya et al. 10/1998 AD42 5,818,869 Abeno et al. 12/1998 AE42 5,844,449 Cranford, Jr. et al. 02/1999 AF42 5,872,446 Cox et al. AG42 5,909,447 06/1999 08/1999 Sehier et al. **AH42** 5,933,467 09/1999 McCune, Jr. et al. A142 5,952,895 FOREIGN PATENT DOCUMENTS **EXAMINER** TRANSLATION DOCUMENT NUMBER COUNTRY CLASS SUB-DATE INITIAL CLASS Yes AJ42 No Yes AK42 No Yes AL42 No Yes AM42 No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Valdmanis, J.A. et al., "Picosecond and Subpicosend Optoelectronics for Measurements of Future High Speed ΑN <u>42</u> Electronic Devices," IEDM Technical Digest, IEEE, pp. 597-600 (December 5-7, 1983). van de Kamp, M.M.J.L., "Asymmetric signal level distribution due to tropospheric scintillation," Electronics AO <u>42</u> Letters, IEE, Vol. 34, No. 11, pp. 1145-1146 (May 28, 1998). Vasseur, H. and Vanhoenacker, D., "Characterization of tropospheric turbulent layers from radiosonde data," AP <u>42</u> Electronics Letters, IEE, Vol. 34, No. 4, pp. 318-319 (February 19, 1998). Verdone, R., "Outage Probability Analysis for Short-Range Communication Systems at 60 Ghz in ATT Urban Environments," IEEE Transactions on Vehicular Technology, IEEE Vehicular Technology Society, Vol. 46, No. 4, AQ 42 pp. 1027-1039 (November 1997). Vierira-Ribeiro, S.A., Single-IF DECT Receiver Architecture using a Quadrature Sub-Sampling Band-Pass Sigma-Delta Modulator, Thesis for Degree of Master's of Engineering, Carleton University, UMI Dissertation AR <u>42</u> Services, pp. 1-180 (April 1995).

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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	AB43	6,041		03/20	00	Davio	lovici <i>et al</i> .					
12/1	AC43	6,054		04/20	00	Koba	yashi			<u> </u>		
4	AD43	6,084	,922	07 <i>/</i> 20	00	Zhou	et al					
4001	AE43	6,125	,271	09/20	00	Rowl	and et al.		<u> </u>			
484	AF43	6,147	,340	11/20	00	Levy				<b></b>		
	AG43	6,147	,763	11/20	00		lechner			<u> </u>		
164	AH43	6,150	,890	11/20			gaard et al.					
A	Al43	5,126	,682	06/19			berg <i>et al.</i>					
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A	AN	<u>43</u>	Vilar, E. et al International 17, 1997).	., "A Co Confer	omprehensivence on And	ve/Sele tennas	ective MM-Wave Satellite Do and Propagation, Electronic	wnlink Experi s Division of (	ment on Fade the IEE, pp. 2.	Dynamics," <i>Tenth</i> 98-2.101 (April 14-		
A	AO	<u>43</u>	Vilar, E. et al Proceedings pp. 8-1 - 8-16	No. 34	6: Characte	ristics	LOS Atmospheric Transmitt of the Lower Atmosphere Inc	ance at 19 Gh Iuencing Rad	z," AGARD Ci io Wave Propa	onference agation, AGARD,		
A	АР	<u>43</u>	Vilar, E. and IEEE Transa	Smith,	H., "A Theo on Antennas	oretical s and I	and Experimental Study of <i>i</i> Propagation, IEEE, Vol. AP-3	Angular Scinti 14, No. 1, pp.	llations in Eart 2-10 (January	h Space Paths," 1986).		
H	AQ 43 Vilar, E. et al., "A Wide Band Transhorizon Experiment at 11.6 Ghz," Eighth International Conference on Antennas and Propagation, Electronics Division of the IEE, pp. 441–445 (March 30- April 2, 1993).											
Æ	AR  43  Vilar, E. and Matthews, P.A., "Amplitude Dependence of Frequency in Oscillators," <i>Electronics Letters</i> , IEE, Vol. 8, No. 20, pp. 509-511 (October 5, 1972).											
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10	AB44_	4,051		09/19		Camp		<del> </del>	+	<del>                                     </del>		
- 11	AC44	5,953	·	09/19			keller et al.	<del>                                     </del>				
	AD44	4,653		03/19		Heck	os et al.	+		1		
<del>2</del>	AE44	5,859		01/19		Jones		<del>                                     </del>				
125	AF44	5,894 5,915		06/19		Mallic		1				
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A	AO	44	Vilar, E. and Context of Fa No. 9, pp. 13	ade Dy	namics," <i>IEI</i>	EE Tra	and Modeling of Time Intervals nsactions on Communications 1).	s Between F s, IEEE Con	Rain Rate Excensions	eedances in the Society, Vol. 39,		
耕	Vilar, E. et al., "Angle of Arrival Fluctuations in High and Low Elevation Earth Space Paths," Fourth International Conference on Antennas and Propagation (ICAP 85), Electronics Division of the IEE, pp. 83-88 (April 16-19, 1985).									Fourth International 88 (April 16-19,		
A	AQ	<u>44</u>	Vilar, E., "An on Teaching	tennas <i>Anten</i>	and Propagnas and Pro	gation: pagation	A Telecommunications Systeon to Undergraduates, IEE, pp	ms Subject, b. 7/1-7/6 (N	" <i>Electronics (</i> larch 8, 1988)	Division Colloquium		
A	AR	44	Vilar, E. et a. Electronics L (April 10, 19	Divisioi	RS*. Millime n Colloquiun	tre-Wa on Cl	ive Beacon Package and Rela ERS- Communications Engine	ated Payloa eering Rese	d Doppler Con arch Satellite,	rection Strategies," IEE, pp. 10/1-10/10		
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23	AA45	6,12	1,819	09/20	000	Tray	or							
48	AB45	6,14	4,236	11/20	000	Vice	et al.							
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33	AD45	6,17	5,728 B1	01/20	001	Mitar	na							
	AE45	5,70	5,949	01/19	98	Alely	unas et al.							
18D	AF45	5,88	3,548	03/19	99	Assa	rd et al.							
727	AG45	4,48	4,143	11/19	984	Fren	ch et al.							
J. W.	AH45	5,84	1,324	11/19	998	Willia	ıms							
-	A145	4,85	5,894	08/19	989	Asah	i et al.							
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A	AN	<u>45</u>	Vilar, E. and I Electronics Le	Moulsi etters,	ey, T.J., "Co IEE, Vol. 21	mmen , No. 1	t and Reply: Probability Der 4, pp. 620-622 (July 4, 198	nsity Func 5).	ction of	Amplitude S	cintillations,"			
科	AO	<u>45</u>	Vilar, E. et al. Letters, IEE, V	, "Corr Vol. 28	iparison of F , No. 20, pp	Rainfall . 1922	Rate Duration Distributions 1924 (September 24, 1992	s for ILE-I ).	FE and	Barcelona,	' Electronics			
A	АР	<u>45</u>	Vilar, E., "Dep No. 9, pp. 732				nsmittances in Indoor Comr	municatio	ns," Ele	ectronics Let	tters, IEE, Vol. 27,			
A	Vilar, E. and Larsen, J.R., "Elevation Dependence of Amplitude Scintillations on Low Elevation Earth Space Paths," Sixth International Conference on Antennas and Propagation (ICAP 89) Part 2: Propagation, IEE, pp. 150-154 (April 4-7, 1989).													
A	AR	<u>45</u>	Vilar, E. et al., "Experimental System and Measurements of Transhorizon Signal Levels at 11 Ghz," 18 <sup>th</sup> European Microwave Conference, Microwave Exhibitions and Publishers Ltd., pp. 429-435 (September 12 - 15, 1988).											
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ATTY. DOCKET NO. APPLICATION NO. 09/987, 193 1744.1200001 FORM PTO-1449 APPLICANT Rawlins et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE 2124 2001 November 13, U.S. PATENT DOCUMENTS **EXAMINER** FILING DATE CLASS SUB-DATE NAME DOCUMENT INITIAL CLASS NUMBER 06/1994 Morita **AA46** 5,319,799 09/1998 Traylor AB46 5,801,654 Galton 11/1994 AC46 5,369,404 Cerny, Jr. 02/1973 AD46 3,716,730 Howell 03/1978 AE46 4,080,573 Hoover 06/1982 AF46 4,334,324 Cerny, Jr. et al. AG46 4,369,522 01/1983 Zhou et al. 11/1995 AH46 5,465,418 04/1996 Reeser et al. A146 5,513,389 FOREIGN PATENT DOCUMENTS **EXAMINER** TRANSLATION CLASS SUB-DOCUMENT NUMBER DATE COUNTRY INITIAL CLASS Yes AJ46 No Yes AK46 No Yes AL46 No Yes **AM46** No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Vilar, E. and Matthews, P.A., "Importance of Amplitude Scintillations in Millimetric Radio Links," Proceedings of the 4th European Microwave Conference, Microwave Exhibitions and Publishers, pp. 202-206 (September 10-13, AN 46 1974). Vilar, E. and Haddon, J., "Measurement and Modeling of Scintillation Intensity to Estimate Turbulence Parameters in an Earth-Space Path," IEEE Transactions on Antennas and Propagation, IEEE Antennas and AO <u>46</u> Propagation Society, Vol. AP-32, No. 4, pp. 340-346 (April 1984). Vilar, E. and Matthews, P.A., "Measurement of Phase Fluctuations on Millimetric Radiowave Propagation," Electronics Letters, IEE, Vol. 7, No. 18, pp. 566-568 (September 9, 1971). ΑP <u>46</u> Vilar, E. and Wan, K.W., "Narrow and Wide Band Estimates of Field Strength for Indoor Communications in the Millimetre Band," Electronics Division Colloquium on Radiocommunications in the Range 30-60 Ghz, IEE, pp. AQ <u>46</u> 5/1-5/8 (January 17, 1991). Vilar, E. and Faulkner, N.D., "Phase Noise and Frequency Stability Measurements. Numerical Techniques and Limitations," Electronics Division Colloquium on Low Noise Oscillators and Synthesizer, IEE, 5 pages (January AR <u>46</u> 23, 1986). DATE CONSIDERED **EXAMINER** EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

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APPLICATION NO. ATTY. DOCKET NO. 09/987,193 1744.1200001 FORM PTO-1449 APPLICANT Rawlins et al. INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE 2124 2001 November 13, U.S. PATENT DOCUMENTS **EXAMINER** FILING DATE CLASS SUB-NAME DATE DOCUMENT INITIAL CLASS NUMBER 09/1999 Lim **AA47** 5,959,850 Tymes **AB47** 5,157,687 10/1992 Nakasuji et al. 08/1999 AC47 5.945.660 Banh AD47 6,091,939 07/2000 Moriyama et al. 07/2000 **AE47** 6,091,941 Swift et al. 08/2000 AF47 6,098,886 06/07/1995 Meyerson et al. 04/2001 AG47 6,215,475 B1 Cook et al. AH47 04/2000 6.049,706 Sorrells et al. 05/2000 A147 6,061,551 FOREIGN PATENT DOCUMENTS **EXAMINER** CLASS SUB-TRANSLATION COUNTRY DATE DOCUMENT NUMBER INITIAL CLASS Yes AJ47 No Yes **AK47** No Yes AL47 No Yes **AM47** No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Vilar, E. and Senin, S., "Propagation phase noise identified using 40 Ghz satellite downlink," Electronics Letters, AN <u>47</u> IEE, Vol. 33, No. 22, pp. 1901-1902 (October 23, 1997). Vilar, E. et al., "Scattering and Extinction: Dependence Upon Raindrop Size Distribution in Temperate (Barcelona) and Tropical (Belem) Regions," *Tenth International Conference on Antennas and Propagation*, Electronics Division of the IEE, pp. 2.230-2.233 (April 14-17, 1997). AO 47 Vilar, E. and Haddon, J., "Scintillation Modeling and Measurement - A Tool for Remote-Sensing Slant Paths," AGARD Conference Proceedings No. 332: Propagation Aspects of Frequency Sharing, Interference And System ΑP <u>47</u> Diversity, AGARD, pp. 27-1 - 27-13 (October 18-22, 1982). Vilar, E., "Some Limitations on Digital Transmission Through Turbulent Atmosphere," International Conference on Satellite Communication Systems Technology, Electronics Division of the IEE, pp. 169-187 (April 7-10, AQ 47 1975). Vilar, E. and Matthews, P.A., "Summary of Scintillation Observations in a 36 Ghz Link Across London," International Conference on Antennas and Propagation Part 2: Propagation, IEE, pp. 36-40 (November 28-30, AR <u>47</u> DATE CONSIDERED **EXAMINER** '0¥ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in

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1	AA48	6,06	31,555	05/20	000	Bultn	nan et al.							
331	AB48	6,09	1,940	07/20	000	Sorre	ells et al.							
37	AC48	6,26	6,518 B1	07/20	001	Sorre	ils et al.				08/18/1999			
<b>***</b>	AD48	6,35	3,735 B1	03/20	002	Sorre	ells et al.		·		08/23/1999			
<b>X</b>	AE48	6,37	0,371 B1	04/20	002	Sorre	ils et al.				03/03/1999			
SIX	AF48	5,62	8,055	05/19	997	Stein								
al.	AG48	5,67	8,220	10/19	97	Four	nier							
	AH48	5,92	26,065	07/19	999	Wak	ai et al.							
<b>1 2 1 1</b>	Al48	3,62	2,885	11/19	971	Ober	dorf <i>et al.</i>							
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Æ	AN	<u>48</u>					ation of Scattering Chann s Division of the IEE, pp. 2							
A	AO	<u>48</u>	Vollmer, A., " and 56 (July (			eceiver	Fits on Two Chips," <i>Elect</i>	ronic Desi	gn, Pen	ton Publishir	ng, pp. 50, 52, 54			
H	АР	<u>48</u>	Voltage and 1		Resolution in	Digitiz	ing Oscilloscopes: Applica	ation Note	348, He	wlett Packa	rd, pp. 1-11			
A	AQ	<u>48</u>	Wan, K.W. et al., "A Novel Approach to the Simultaneous Measurement of Phase and Amplitude Noises in Oscillator," <i>Proceedings of the 19<sup>th</sup> European Microwave Conference</i> , Microwave Exhibitions and Publishers Ltd., pp. 809-813 (September 4-7, 1989).											
A	AR	<u>48</u>	Synthesis of	Wan, K.W. et al., "Extended Variances and Autoregressive/Moving Average Algorithm for the Measurement and Synthesis of Oscillator Phase Noise," <i>Proceedings Of the 43<sup>rd</sup> Annual Symposium on Frequency Control</i> , IEEE, pp. 331-335 (1989).										
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***	AA49	4,483		11/19	84	Hamp	oel et al.				·		
\$	AB49	<del>                                     </del>	,534 B1	07/20	02	Cook	et al.				08/18/1999		
	AC49	6,330	),244 B1	12/20	01	Swar	tz et al.			<u> </u>	01/16/1998		
274	AD49	4,384	1,357	05/19	83	deBu	da et al.						
THE STATE OF THE S	AE49	4,470	), 145	09/19	84	Willia	ms						
- (B)	AF49	5,600	),680	02/19	97	Mishi	ma et al.						
33	AG49	5,606	5,731	02/19	97	Pace	et al.			<del> </del>			
431	AH49	5,870	0,670	02/19	99	Riple	y et al.		_	<del> </del>			
<b>CD</b>	Al49	6,314	1,279 B1	11/20	01	Mohi	ndra			<u> </u>	06/29/1998		
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A	AO	<u>49</u>	Wang, H., "A Solid-State C	. 1-V M Circuits	lultigigahert: Society, Vo	z RF M ol. 33, N	ixer Core in 0.5 - μm CM lo. 12, pp. 2265-2267 (De	OS," <i>IEEE</i> ecember 1	<i>Journal</i> 1998).	l of Solid-Sta	te Circuits, IEEE		
A	AP	<u>49</u>	Watson, A.W Receivers," <i>I</i> 367-373 (Apr	Digital i	Processing :	of Sign	sion and Signal Processi als in Communications, Ir	ng for Hig nstitution	h Perfor	mance Comr onic and Rad	nunications lio Engineers, pp.		
A	AQ	<u>49</u>	Weast, R.C. et al. (Ed.), Handbook of Mathematical Tables, Second Edition, The Chemical Rubber Co., pp. 480-485 (1964).										
A	AR	<u>49</u>	Wiley, R.G., IEEE, Vol. C	"Appro OM-29	oximate FM I, No. 7, pp.	Democ 1061-1	Iulation Using Zero Cross 1065 (July 1981).	ings," <i>IEE</i>	E Trans	actions on C	ommunications,		
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